September 7, 2006

FINDING OF NO SIGNIFICANT IMPACT

TO ALL INTERESTED GOVERNMENTAL AGENCIES AND PUBLIC GROUPS

As required by State and Federal rules for determining whether an Environmental Impact Statement is necessary, an environmental review has been performed on the proposed action below:

Project:	Pablo/Lake County Water and Sewer District Wastewater Treatment System Improvements
Location:	Pablo, Montana
Project Number:	XP-97834001-0
Total Cost:	$3,673,244
EPA (STAG) Share:	$477,900

The Pablo/Lake County Water and Sewer District (District), through the Wastewater Preliminary Engineering Report/Design Report, April 2002 (PER), has identified the need to increase treatment capacity of their existing wastewater treatment facility (WWTF). The existing WWTF consists of a two-celled aerated lagoon system followed by partial discharge through either two existing infiltration/percolation (I/P) cells or through a spray irrigation system. During the time the existing system underwent an expansion project in 2000, a phased expansion approach was proposed. In addition to the 2000 project, several additional phases were planned with the next expansion phase occurring near the year 2005. The existing system is now approaching its design capacity through excessive growth in population within the service area of the District. The proposed solution includes an expansion of the existing aeration system, construction of additional storage lagoon cells and expansion of the existing spray irrigation area utilizing additional spray irrigation units. The existing I/P cells would be eliminated with the proposed WWTF project. Partial funding for this project has been provided by an Environmental Protection Agency grant (STAG). Additional funding will be from other Federal and State sources and local funds. Environmentally sensitive characteristics such as historic sites, wetlands, floodplains, prime agricultural land, and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. Minor short-term environmental impacts associated with the construction activities will occur. No significant long-term environmental impacts were identified. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is attached to this Finding of No Significant Impact (FONSI).

These documents are available for public scrutiny on the Department of Environmental Quality web site (http://www.deq.state.mt.us/ea.asp) and also at the following locations:

Department of Environmental Quality
PPA/TFA
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901

Pablo/Lake County Water & Sewer District
208 Carbine Road
P.O. Box 550
Pablo, Montana 59855

Comments supporting or disagreeing with this FONSI and EA may be submitted for consideration by the Department of Environmental Quality. There will be a thirty (30) day comment period from the date of this notice for the public to submit written comments to the Technical and Financial Assistance Bureau concerning the proposed facilities. Email comments may be sent to shatten@mt.gov. After evaluating the comments received, the agencies will make a final decision. However, no administrative action will be taken on the project for at least 30 calendar days after release of the FONSI.

Sincerely,

Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau
Planning, Prevention & Assistance Division

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Name of Project: Pablo/Lake County Water and Sewer District
Wastewater Treatment System Improvements

Location of Project: South ½ of Section 11, T21N, R20W
Planning area also includes Sections 1, 2, and 12, T21N, R20W

City/Town: Pablo **County**: Lake

Description of Project: The Pablo/Lake County Water and Sewer District (District), through the Wastewater Preliminary Engineering Report/Design Report, April 2002 (PER), has identified the need to increase treatment capacity of their existing wastewater treatment facility (WWTF). The existing WWTF consists of a two-celled aerated lagoon system followed by partial discharge through either two existing infiltration/percolation (I/P) cells or through a spray irrigation system. During the time the existing system underwent an expansion project in 2000, a phased expansion approach was proposed. In addition to the 2000 project, several additional phases were planned with the next expansion phase occurring near the year 2005. The existing system is now approaching its design capacity through excessive growth in population within the service area of the District. The proposed solution includes an expansion of the existing aeration system, construction of additional storage lagoon cells and expansion of the existing spray irrigation area utilizing additional spray irrigation units. The existing I/P cells would be eliminated with the proposed WWTF project.

Alternative Analysis: The following alternatives were considered and evaluated in the PER:

Alternative 1. Total Containment

Alternative 1 would include construction of a total containment WWTF that would rely entirely on evaporation for effluent disposal. Based on preliminary cost estimates documented in the PER, implementation of this alternative is estimated at approximately $13,184,173. A total containment facility would require very little operation and maintenance and would not need to operate under a discharge permit; however, the additional land that would need to be purchased for operation of this type of system makes this alternative cost prohibitive for the District.

Alternative 2. Aerated Treatment followed by Storage with Final Disposal by Spray Irrigation

Alternative 2 would include expanding the existing aeration treatment, storage and spray irrigation facility to meet the identified design flows followed by expansion of the existing storage capacity and spray irrigation area inclusive of spray irrigation equipment. This alternative also includes the addition of UV disinfection. Based on preliminary cost estimates documented in the PER, costs associated with this alternative are estimated at approximately $2,788,524. **Based on all evaluating factors, this alternative was selected as the preferred alternative.**

Alternative 3. Facultative Treatment with Storage with Final Disposal by Spray Irrigation

Alternative 3 would include changing operation from treatment through aeration to facultative treatment followed by storage and disposal through spray irrigation. This alternative would require expansion of the existing lagoon size in order to meet DEQ standards for minimum detention time. This alternative was not selected based on a lower design life, excessive costs (greater than costs associated with previous alternative), and wasting of existing aeration equipment.

Alternative 4. Aeration Treatment, Storage, Polishing by Wetlands with Surface Water Discharge

Alternative 4 would include expanding the existing aeration treatment system and storage capacity followed by construction of a wetland disposal facility. In addition to effluent disposal through a wetland system, a surface water discharge is also proposed under this alternative. Based on preliminary cost estimates documented in the PER, costs associated with this alternative are estimated at approximately $3,069,095. Based on the uncertainty of obtaining an NPDES discharge permit and uncertainty of obtaining the necessary easements, this alternative was determined to be economically and politically unfavorable, and therefore removed from further consideration.

Financial Impact of Project:

A summary of the funding strategy for this project is shown in Table 1. The majority of the project costs would be paid for by grants awarded to the District for use on this project. The remaining costs would be paid for by the District with bond financing coming from a low interest loan from Rural Development. As estimated in the PER, a sewer rate increase of approximately $19.10/month is anticipated to pay off the loan and also pay for increasing operation and maintenance costs.

Table 1. PROJECT FINANCING SUMMARY

Funding Sources	Contribution
TSEP Grant	$500,000
CDBG Grant	$500,000
DNRC Grant	$100,000
RD Loan	$887,200
RD Grant	$1,193,364
STAG (including set-aside/legal/bond costs)	$492,680
Total Estimated Cost of Project	**$3,673,244**

Design Conditions:

The proposed project will be designed for a 20-year design life (design year 2026). The design population, determined based on 4% growth and other additional impending growth, is determined to be 3,470 persons. The proposed project will be designed for an average daily flow of 329,650 gallons per day (95 gallons per day x 3,470 persons).

Project Area Maps:

All project area maps are included in Appendix A. A site location map is included in Figure 1. Schematic drawings of the proposed project are included in Figures 2 and 3.

Reference Documents:

The following document has been utilized in the environmental review of this project and is considered to be part of the project file:

Final Preliminary Engineering Report Pablo/Lake County Water and Sewer District Wastewater Treatment System Improvements, Neil Consultants, Inc., April 2002.

Pablo/Lake County Water and Sewer District Design Report (DRAFT), Neil Consultants, Inc., January 2006.

Agency Action:
Plan review and approval for the above-mentioned project.

Other Agency Approvals:

☐ DNRC Water rights
☒ Other: EPA and Tribal Permits
☐ DEQ Subdivision Review
☐ DEQ Water Discharge Permit

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] Soils in the immediate adjacent areas surrounding the wastewater treatment site contain mostly soil types that can be classified as silty/clayey medium fine grained soils, non plastic, with liquid limits ranging from 15 to 25. These soils are not suitable for road base, and are all considered extremely unfavorable for dike embankment material; therefore, these surface native materials would have to be mixed with additional favorable materials as road base or dike embankment. The new facility will include a membrane liner. Most of the terrain is relatively flat with minor relief at the south and west sides of the proposed irrigation area.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water	[N] Groundwater Resources & Aquifers: Pablo is currently served by both water and sewer systems. Local monitoring wells (upgradient and downgradient) indicate elevated nitrate levels. This project proposes to eliminate continued use of the I/P cells and therefore, dramatically reduce potential impacts to groundwater. The proposed project includes a spray irrigation system that will be sized for agronomic uptake rates.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
quality?	Surface Water: Surface drainage for Pablo generally flows south, and diverts toward several small creeks that follow the regional surface drainage pattern toward the southwest. Several irrigation ditches are also present in and around the Pablo area. The only adjacent surface water is a drainage tile system located in the southwest corner of the proposed spray irrigation site. No adverse impact to surface water is anticipated.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[Y] Short-term negative impacts on the air quality will occur from heavy equipment dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be taken during construction to control dust, thus minimizing this problem. Brief adverse impacts to air quality may occur in the vicinity of the storage lagoon. The potential for odors in the storage lagoon is minimal as the wastewater is biologically treated and stabilized prior to the effluent being piped to the storage cell.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] Vegetation in the excavation areas will be affected; however, all of these species are common and plentiful in the area. After the project is complete, the area will be reseeded with native vegetation to replace what is lost. No long-term affects to vegetation are anticipated as a result of this project.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] No long-term impacts to vegetation, wildlife species, or habitats are anticipated as a result of this project.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] The US Fish and Wildlife Service reviewed the project and provided a list of several species considered threatened and endangered. Due to the scope, location, and nature of the proposed project, no impacts to these listed species are anticipated. No wetlands are located within the area of the proposed expanded treatment/spray irrigation area. There are wetland areas located downgradient that will potentially benefit from the upgrades as the overall water quality should improve.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[Y] According to the State Historic Preservation Office (SHPO), new ground disturbance may occur as a result of the proposed project; therefore, they recommend that a cultural resource inventory be conducted in order to determine whether or not such sites are present or if a preexisting site will be impacted. There have been three previously recorded historic sites in this area.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N] The new facility is not expected to create additional visual distraction; however, additional land will be utilized for the spray irrigation system. No additional noise or light is anticipated as a result of this project. The existing noise due to operating blowers will continue. To mitigate this noise, the blowers are located in a blower building and are equipped with sound dampening equipment.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	[Y] There will be an increased energy demand from this project in order to operate the additional aerators and spray irrigation system. This additional energy demand cannot be avoided. However, it is relatively minimal in proportion to regional demands.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No other activities nearby are expected to affect the proposed project.

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] Public safety and health will improve as a result of the proposed project. Elevated levels of nitrates in groundwater have been attributed or partially attributed to the I/P cells currently being used for effluent disposal. This proposed project will solely discharge effluent through a spray irrigation system at agronomic uptake rates and therefore, eliminate disposal to groundwater. This will likely enhance the downgradient groundwater quality.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] No impacts are anticipated; however, commercial and industrial growth may occur as a result of this project. More capacity will allow more hookups. The proposed land application system will provide irrigation water to an area with an existing agricultural use.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No impacts to the quantity and distribution of employment are anticipated; however, providing an adequate wastewater treatment facility could enhance the commercial and industrial development atmosphere, which could result in improved employment opportunities for area residents. The new facility will be operated by the same number of operators.

IMPACTS ON THE HUMAN ENVIRONMENT	
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] Providing an adequate wastewater treatment facility could enhance the commercial and industrial development atmosphere, which could result in improved employment opportunities for area residents. As such, the local and state tax base and revenues may increase.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] Substantial traffic additions to existing roads are not anticipated as a result of this project. Temporary traffic disruptions may occur during the bore and jack portion of the project beneath Carbine Road in order to install a force main connecting to the new spray irrigation area. Construction traffic control will be required for work within the road right of ways. Increased demand for fire protection, police, schools, etc. is not expected as result of this project; however, residential growth may occur as a result of this project ultimately increasing demand on governmental services such as fire protection, police, schools, etc.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] The proposed project will be done in accordance with all applicable zoning and management plans.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] Public lands and open space will not be affected as a result of this project. The entire project site is owned by the District.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No impacts are anticipated; however, providing an adequate wastewater treatment facility could enhance residential population and housing. Future density can be controlled with proper zoning.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No changes to native or traditional lifestyles are anticipated as a result of this project.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No changes to cultural uniqueness and diversity are anticipated as a result of this project.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC	[N] No additional adverse impacts are anticipated socially or economically than previously written.

IMPACTS ON THE HUMAN ENVIRONMENT	
CIRCUMSTANCES:	
22. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] No further analysis is necessary.

23. Summary of Magnitude and Significance of Potential Impacts:

No significant adverse impacts are anticipated as a result of this project.

Short-term negative impacts on the air quality will occur from heavy equipment dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be taken during construction to control dust, thus minimizing this problem. Brief adverse impacts to air quality may occur in the vicinity of the storage cells. However, these impacts should be minimal as there is a low potential for odor generation at the storage lagoon site because the wastewater is biologically treated and stabilized prior to the effluent being piped to the storage cell.

Soils in the immediate adjacent areas surrounding the wastewater treatment site are not suitable for road base, and are all considered extremely unfavorable for dike embankment material. This will be mitigated by mixing these surface native materials with additional favorable materials as road base or dike embankment.

No additional noise or light is anticipated as a result of this project. The existing noise due to operating blowers will continue. To mitigate this noise, the blowers are located in a blower building and are equipped with sound dampening equipment.

According to the State Historic Preservation Office (SHPO), new ground disturbance may occur as a result of the proposed project. A cultural resource inventory will be conducted in order to determine whether or not such sites are present or if a preexisting site will potentially be impacted.

There will be an increased energy demand from this project in order to operate the additional aerators and spray irrigation system. This additional energy demand cannot be avoided; however, it is relatively minimal in proportion to regional demands.

24. Cumulative Effects:

No significant adverse impacts are anticipated; however, providing additional capacity for wastewater treatment ultimately allows for additional hookups to the treatment facility. Residential population and housing in addition to commercial and industrial growth may

occur as a result of this project. This growth could result in land use changes and increased traffic in the area; however, these changes are anticipated to be minimal. Future density can be controlled with proper zoning.

25. Preferred Action Alternative and Rationale:

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation: Through this environmental assessment, the DEQ has made a preliminary determination that none of the adverse impacts of the proposed Pablo/Lake County Water and Sewer District Wastewater Treatment System Improvements project are significant. Therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609, and 17.4.610. The environmental assessment is the appropriate level of analysis because none of the adverse effects of the impacts are expected to be significant.

EA Checklist Prepared By:

_____ _____
Skye Hatten, E.I. Date

EA Checklist Reviewed By:

_____ _____
Paul LaVigne, P.E. Date

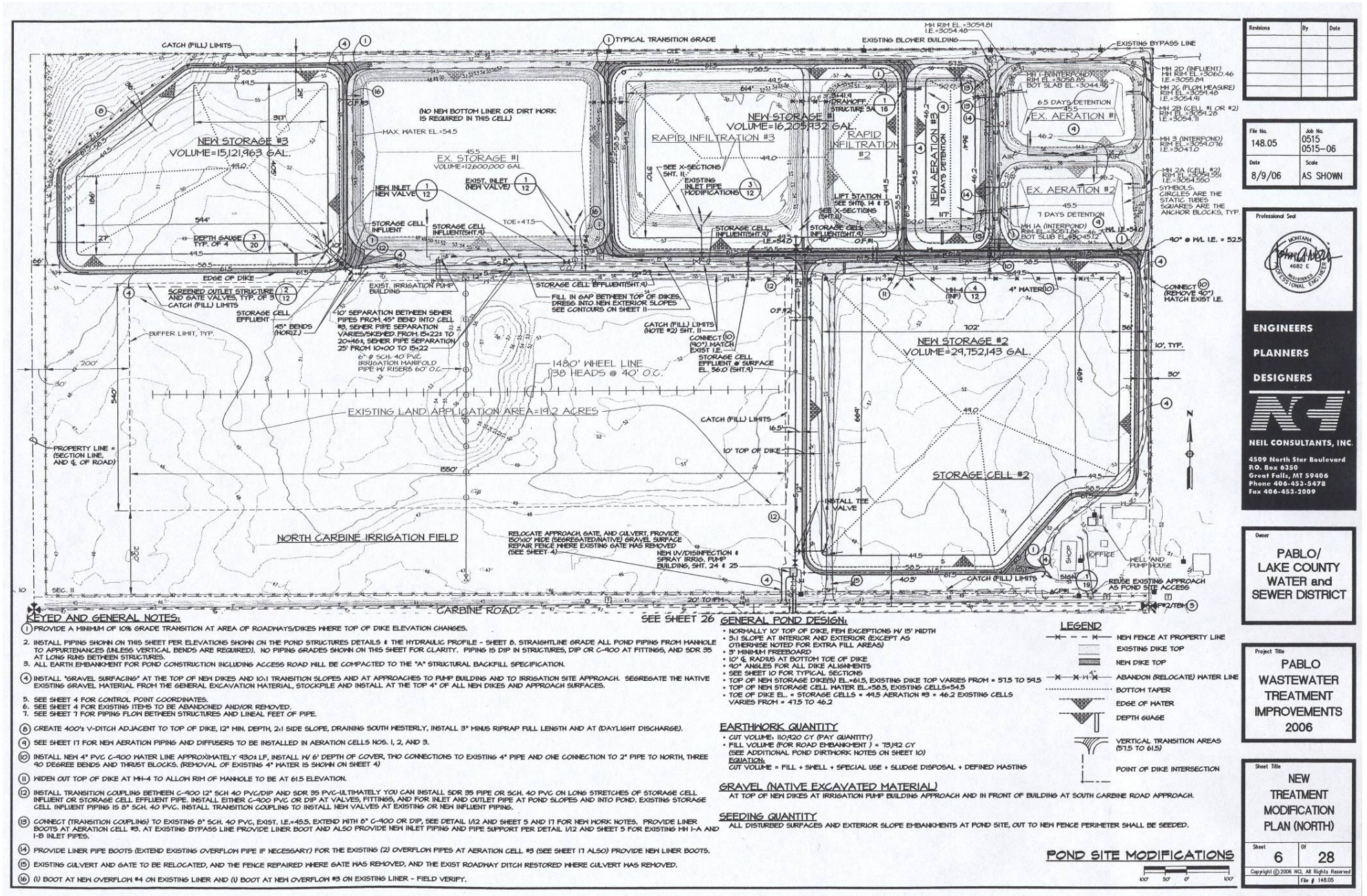
EA Checklist Approved By:

_____ _____
Todd Teegarden, P.E. Date

APPENDIX A
PROJECT AREA MAPS

Montana Department of
ENVIRONMENTAL QUALITY

Figure 1. Site Location Map – Pablo, MT



KEYED AND GENERAL NOTES:

1. PROVIDE A MINIMUM OF 10% GRADE TRANSITION AT AREA OF ROADWAYS/DIKES WHERE TOP OF DIKE ELEVATION CHANGES.
2. INSTALL PIPING SHOWN ON THIS SHEET PER ELEVATIONS SHOWN ON THE POND STRUCTURES DETAILS & THE HYDRAULIC PROFILE - SHEET 8. STRAIGHTLINE GRADE ALL POND PIPING FROM MANHOLE TO APPURTENANCES (UNLESS VERTICAL BENDS ARE REQUIRED). NO PIPING GRADES SHOWN ON THIS SHEET FOR CLARITY. PIPING IS DIP IN STRUCTURES, DIP OR C-900 AT FITTINGS, AND SDR 35 AT LONG RUNS BETWEEN STRUCTURES.
3. ALL EARTH EMBANKMENT FOR POND CONSTRUCTION INCLUDING ACCESS ROAD WILL BE COMPACTED TO THE "A" STRUCTURAL BACKFILL SPECIFICATION.
4. INSTALL "GRAVEL SURFACING" AT THE TOP OF NEW DIKES AND 10:1 TRANSITION SLOPES AND AT APPROACHES TO PUMP BUILDING AND TO IRRIGATION SITE APPROACH. SEGREGATE THE NATIVE EXISTING GRAVEL MATERIAL FROM THE GENERAL EXCAVATION MATERIAL, STOCKPILE AND INSTALL AT THE TOP 4" OF ALL NEW DIKES AND APPROACH SURFACES.
5. SEE SHEET 4 FOR CONTROL POINT COORDINATES.
6. SEE SHEET 4 FOR EXISTING ITEMS TO BE ABANDONED AND/OR REMOVED.
7. SEE SHEET 7 FOR PIPING FLOW BETWEEN STRUCTURES AND LINEAL FEET OF PIPE.
8. CREATE 400'± V-DITCH ADJACENT TO TOP OF DIKE, 12" MIN. DEPTH, 2:1 SIDE SLOPE, DRAINING SOUTH WESTERLY, INSTALL 3" MINUS RIPRAP FULL LENGTH AND AT (DAYLIGHT DISCHARGE).
9. SEE SHEET 17 FOR NEW AERATION PIPING AND DIFFUSERS TO BE INSTALLED IN AERATION CELLS NOS. 1, 2, AND 3.
10. INSTALL NEW 4" PVC C-900 WATER LINE APPROXIMATELY 930± LF, INSTALL W/ 6' DEPTH OF COVER, TWO CONNECTIONS TO EXISTING 4" PIPE AND ONE CONNECTION TO 2" PIPE TO NORTH, THREE 90 DEGREE BENDS AND THRUST BLOCKS. (REMOVAL OF EXISTING 4" WATER IS SHOWN ON SHEET 4)
11. WIDEN OUT TOP OF DIKE AT MH-4 TO ALLOW RIM OF MANHOLE TO BE AT 61.5 ELEVATION.
12. INSTALL TRANSITION COUPLING BETWEEN C-900 12" SCH 40 PVC/DIP AND SDR 35 PVC-ULTIMATELY YOU CAN INSTALL SDR 35 PIPE OR SCH. 40 PVC ON LONG STRETCHES OF STORAGE CELL INFLUENT OR STORAGE CELL EFFLUENT PIPE. INSTALL EITHER C-900 PVC OR DIP AT VALVES, FITTINGS, AND FOR INLET AND OUTLET PIPE AT POND SLOPES AND INTO POND. EXISTING STORAGE CELL INFLUENT PIPING IS 8" SCH. 40 PVC. INSTALL TRANSITION COUPLING TO INSTALL NEW VALVES AT EXISTING OR NEW INFLUENT PIPING.
13. CONNECT (TRANSITION COUPLING) TO EXISTING 8" SCH. 40 PVC, EXIST. I.E.=45.5. EXTEND WITH 8" C-900 OR DIP, SEE DETAIL 1/12 AND SHEET 5 AND 17 FOR NEW WORK NOTES. PROVIDE LINER BOOTS AT AERATION CELL #3. AT EXISTING BYPASS LINE PROVIDE LINER BOOT AND ALSO PROVIDE NEW INLET PIPING AND PIPE SUPPORT PER DETAIL 1/12 AND SHEET 5 FOR EXISTING MH I-A AND I-B INLET PIPES.
14. PROVIDE LINER PIPE BOOTS (EXTEND EXISTING OVERFLOW PIPE IF NECESSARY) FOR THE EXISTING (2) OVERFLOW PIPES AT AERATION CELL #3 (SEE SHEET 17 ALSO) PROVIDE NEW LINER BOOTS.
15. EXISTING CULVERT AND GATE TO BE RELOCATED, AND THE FENCE REPAIRED WHERE GATE WAS REMOVED, AND THE EXIST ROADWAY DITCH RESTORED WHERE CULVERT WAS REMOVED.
16. (1) BOOT AT NEW OVERFLOW #4 ON EXISTING LINER AND (1) BOOT AT NEW OVERFLOW #3 ON EXISTING LINER - FIELD VERIFY.

GENERAL POND DESIGN:

- NORMALLY 10' TOP OF DIKE, FEW EXCEPTIONS W/ 15' WIDTH
- 3:1 SLOPE AT INTERIOR AND EXTERIOR (EXCEPT AS OTHERWISE NOTED FOR EXTRA FILL AREAS)
- 3' MINIMUM FREEBOARD
- 10' ℄ RADIUS AT BOTTOM TOE OF DIKE
- 90° ANGLES FOR ALL DIKE ALIGNMENTS
- SEE SHEET 10 FOR TYPICAL SECTIONS
- TOP OF NEW STORAGE DIKE(S) EL.=61.5, EXISTING DIKE TOP VARIES FROM = 57.5 TO 59.5
- TOP OF NEW STORAGE CELL WATER EL.=58.5, EXISTING CELLS=54.5
- TOE OF DIKE EL. = STORAGE CELLS = 44.5 AERATION #3 = 46.2 EXISTING CELLS VARIES FROM = 47.5 TO 46.2

EARTHWORK QUANTITY

- CUT VOLUME= 110,920 CY (PAY QUANTITY)
- FILL VOLUME (FOR ROAD EMBANKMENT) = 73,912 CY (SEE ADDITIONAL POND DIRTWORK NOTES ON SHEET 10)

EQUATION:
CUT VOLUME = FILL + SHELL + SPECIAL USE + SLUDGE DISPOSAL + DEFINED WASTING

GRAVEL (NATIVE EXCAVATED MATERIAL)
AT TOP OF NEW DIKES AT IRRIGATION PUMP BUILDING APPROACH AND IN FRONT OF BUILDING AT SOUTH CARBINE ROAD APPROACH.

SEEDING QUANTITY
ALL DISTURBED SURFACES AND EXTERIOR SLOPE EMBANKMENTS AT POND SITE, OUT TO NEW FENCE PERIMETER SHALL BE SEEDED.

LEGEND

- NEW FENCE AT PROPERTY LINE
- EXISTING DIKE TOP
- NEW DIKE TOP
- ABANDON (RELOCATE) WATER LINE
- BOTTOM TAPER
- EDGE OF WATER
- DEPTH GUAGE
- VERTICAL TRANSITION AREAS (57.5 TO 61.5)
- POINT OF DIKE INTERSECTION

POND SITE MODIFICATIONS

100' 50' 0' 100'

Revisions	By	Date

File No.	Job No.
148.05	0515 0515-06
Date	Scale
8/9/06	AS SHOWN

Professional Seal
MONTANA
John Neil Abell
4682 E
REGISTERED PROFESSIONAL ENGINEER

ENGINEERS
PLANNERS
DESIGNERS

NEIL CONSULTANTS, INC.
4509 North Star Boulevard
P.O. Box 6350
Great Falls, MT 59406
Phone 406-453-5478
Fax 406-453-2009

Owner
PABLO/
LAKE COUNTY
WATER and
SEWER DISTRICT

Project Title
PABLO
WASTEWATER
TREATMENT
IMPROVEMENTS
2006

Sheet Title
NEW
TREATMENT
MODIFICATION
PLAN (NORTH)

Sheet	Of
6	28

File # 148.05

Figure 2. Proposed Wastewater Treatment Improvements/Modifications (North of Carbine Road)

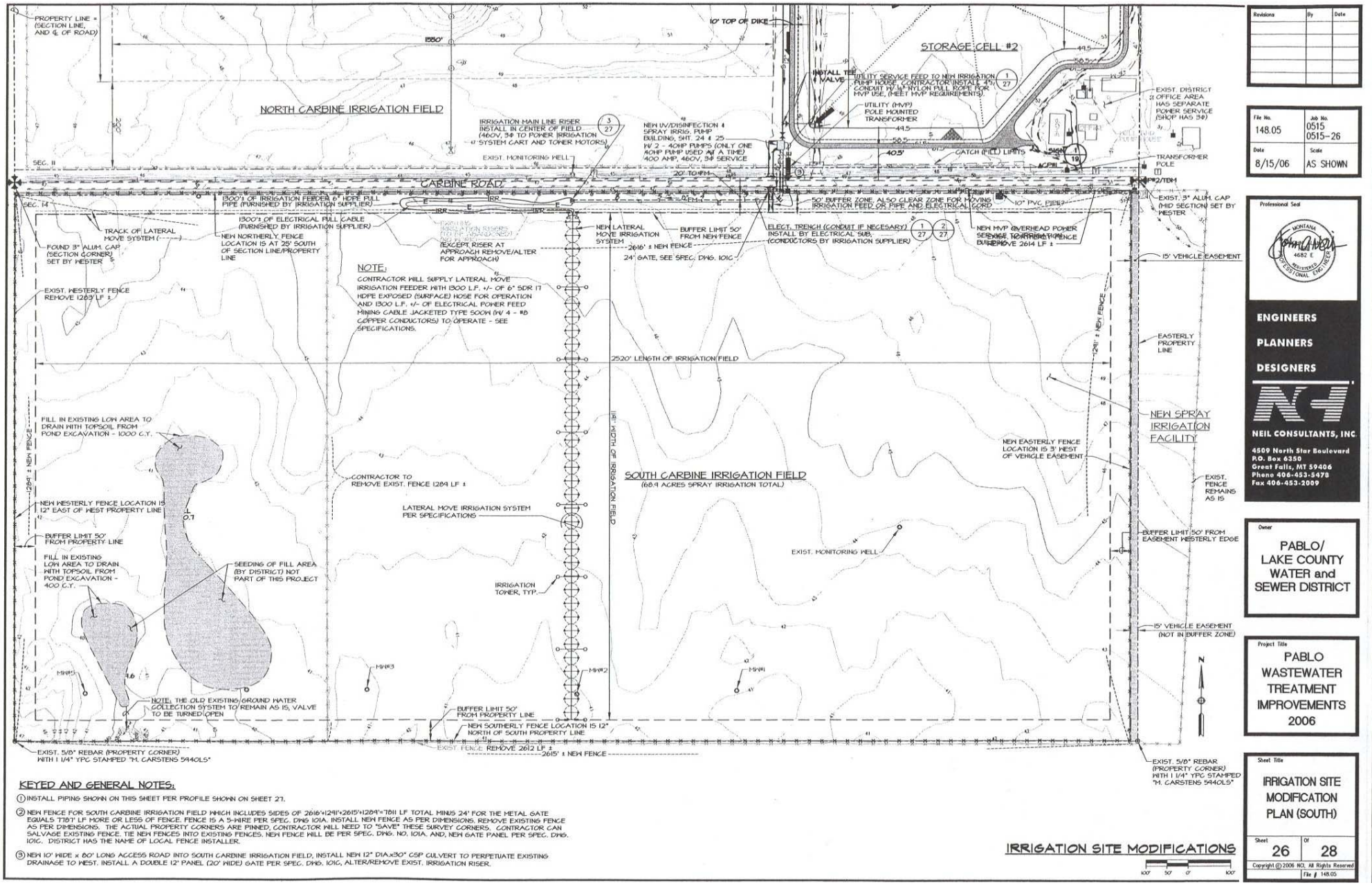


Figure 3. Proposed Wastewater Treatment Improvements/Modifications (South of Carbine Road)